

What is Claimed is:

1. A method of identifying a fetal cell in a maternal blood sample, the method comprising detecting a maternal antibody bound to a fetal cell.
2. The method of claim 1, wherein the method further comprises exposing the maternal antibody bound to a fetal cell to an agent capable of forming a complex with the maternal antibody.
3. The method of claim 2, wherein the agent is detectably labelled.
4. The method of claim 3, wherein the label is used to detect the fetal cell-maternal antibody complex.
5. A method of identifying a fetal cell in a sample, the method comprising exposing cells in the sample to maternal antibodies, and detecting a maternal antibody bound to a fetal cell, wherein the maternal antibodies comprise maternally produced antibodies specific for paternally-inherited fetal antigens.
6. The method according to claim 5, wherein the maternal antibodies are prepared by a process comprising dissociation of antibodies from a complex with a soluble HLA antigen and/or an anti-idiotypic antibody.
7. The method of claim 5 or 6, wherein the method further comprises exposing the maternal antibody bound to a fetal cell to an agent capable of forming a complex the maternal antibody.
8. The method according to any one of claims 2 to 7, wherein the agent is an antibody or antibody fragment.
9. The method according to any one of claims 2 to 7, wherein the agent is a polypeptide that binds to an immunoglobulin.

10. The method of claim 9, wherein the polypeptide is selected from the group consisting of: protein A, protein G and protein L.

11. The method according to any one of claims 2 to 10, wherein the agent is detectably labelled.

12. The method of claim 11, wherein the label on the agent is used to detect the fetal cell-maternal antibody complex.

13. The method according to claim 11 or 12, wherein the label is selected from the group consisting of: a fluorescent label, a radioactive label, a paramagnetic particle, a chemoluminescent label, a label that is detectable by virtue of a secondary enzymatic reaction, and a label that is detectable by virtue of binding to a molecule.

14. The method of claim 13, wherein the label is a paramagnetic particle and wherein the step of detecting the fetal cell-maternal antibody complex comprises exposing the cells bound by agent-maternal antibody complexes to a magnet.

15. The method according to claim 13, wherein the label is a fluorescent label and wherein the step of detecting the fetal cell-maternal antibody complex performing fluorescence activated cell sorting.

16. A method of enriching fetal cells from a maternal blood sample, the method comprising the steps of:

- i) isolating a fraction comprising peripheral blood mononuclear cells from the sample;
- ii) contacting the fraction at i) with an antibody from a maternal blood sample under conditions sufficient to permit maternally produced antibodies specific for paternally-inherited fetal antigens to bind fetal cells in the fraction;
- iii) contacting the complexed cells from ii) with an agent capable of forming a complex with maternal antibodies; and
- iv) recovering cells bound to agent-maternal antibody complexes.

17. The method of claim 16, wherein i) further comprises removing antibodies bound to cell surface antigens from the cells or removing antigen-antibody complexes from the cells.

18. The method according to claim 16 or 17, wherein cells in the fraction at i) of claim 16 are at least partially purified before being contacted with the antibody.

19. The method of claim 18, wherein the fraction at i) of claim 16 is depleted of a least one maternal cell type.

20. The method according to any one of claims 16 to 19, wherein the antigen-reactive antibodies obtained from the maternal blood sample have been prepared by dissociation from a complex with a soluble HLA antigen and/or an anti-idiotypic antibody.

21. The method according to any one of claims 16 to 20, wherein ii) and iii) of claim 16 are performed under conditions in which the complement lysis pathway does not or cannot function.

22. The method according to any one of claims 16 to 21, wherein the peripheral blood mononuclear cells are cultured *in vitro* before step ii) of claim 16 is performed.

23. The method according to any one of claims 16 to 22, wherein the agent is bound to a detectable label or isolatable label.

24. The method of claim 23, wherein the detectable label or isolatable label is selected from the group consisting of: a fluorescent label, a radioactive label, a paramagnetic particle, a chemoluminescent label, a label that is detectable by virtue of a secondary enzymatic reaction, and a label that is detectable by virtue of binding to a molecule.

25. The method of claim 23 or 24, wherein the step of recovering cells bound to agent-maternal antibody complexes comprises detecting the label and obtaining a fraction comprising the label.

26. The method according to claim 25, wherein the detectable label or isolatable label is a fluorescent label and wherein the step of recovering cells bound by agent-maternal antibody complexes comprises performing fluorescence activated cell sorting.

27. The method of claim 25, wherein the detectable label or isolatable label is a paramagnetic particle and wherein the step of recovering cells bound by agent-maternal antibody complexes comprises exposing the cells bound by agent-maternal antibody complexes to a magnet.

28. The method according to any one of claims 16 to 27, wherein the agent is an antibody or fragment of an antibody.

29. The method according to any one of claims 16 to 27, wherein the agent is a polypeptide that binds to an immunoglobulin.

30. The method of claim 29, wherein the polypeptide binds to any class of human antibody.

31. A method of enriching fetal cells from a maternal blood sample comprising recovering fetal cell-maternal antibody complexes from the sample.

32. A method of enriching fetal cells from a sample of cells obtained from maternal blood, the method comprising exposing cells in the sample to maternal antibodies and recovering fetal cell-maternal antibody complexes, wherein the maternal antibodies comprise maternally produced antibody specific for paternally-inherited fetal antigens.

33. The method according to claim 32, wherein the maternal antibodies are prepared by a process comprising dissociation of antibodies from a complex with a soluble HLA antigen and/or an anti-idiotypic antibody.

34. The method according to any one of claims 31 to 33 wherein the step of recovering the fetal cell-maternal antibody complexes from the sample is performed by contacting the complex

with an agent capable of binding to a maternal antibody in said complex and recovering cells bound by agent-maternal antibody complexes.

35. A method of enriching fetal cells from a maternal blood sample, the method comprising contacting maternal blood or a nucleated cellular fraction thereof comprising fetal cells with an antibody-containing fraction of maternal plasma for a time and under conditions sufficient to permit formation of a fetal cell-maternal antibody complex, contacting the complex with an agent capable of binding to a maternal antibody in said complex and recovering cells bound by agent-maternal antibody complexes.

36. The method according to claim 35, wherein the antibody-containing fraction of maternal plasma is prepared by a process comprising dissociating antibodies in maternal plasma from a complex with a soluble HLA antigen and/or an anti-idiotypic antibody.

37. The method according to any one of claims 34 to 36, wherein the agent is bound to a detectable label or isolatable label.

38. The method of claim 37, wherein the detectable label or isolatable label is selected from the group consisting of: a fluorescent label, a radioactive label, a paramagnetic particle, a chemoluminescent label, a label that is detectable by virtue of a secondary enzymatic reaction, and a label that is detectable by virtue of binding to a molecule.

39. The method of claim 37 or 38, wherein the step of recovering cells bound by agent-maternal antibody complexes comprises detecting the label and obtaining a fraction comprising the label.

40. The method according to claim 39, wherein the detectable label or isolatable label is a fluorescent label and wherein the step of recovering cells bound by agent-maternal antibody complexes comprises performing fluorescence activated cell sorting.

41. The method of claim 39, wherein the detectable label or isolatable label is a paramagnetic particle and wherein the step of recovering cells bound by agent-maternal antibody complexes comprises exposing the cells bound by agent-maternal antibody complexes to a magnet.
42. The method according to any one of claims 34 to 41, wherein the agent is an antibody or antibody fragment.
43. The method according to any one of claims 34 to 41, wherein the agent is a polypeptide that binds to an immunoglobulin.
44. The method of claim 43, wherein the polypeptide is selected from the group consisting of: protein A, protein G and protein L.
45. The method according to any one of claims 5 to 7, 16 to 30 or 32 to 44, wherein maternal blood or a cellular fraction thereof is partially purified before being exposed to an antibody or partially purified before being exposed to an agent.
46. The method of claim 45, wherein the partial purification comprises depleting the cells of a least one maternal cell type.
47. Isolated fetal cells when obtained a process comprising performing the method according to any one of claims 1 to 46.
48. A composition comprising isolated fetal cells obtained by a method of any one of claims 1 to 46 and a carrier.
49. Use of a maternally produced antibody that binds specifically to a paternally-inherited fetal antigen for enriching fetal cells from maternal blood or a nucleated cellular fraction thereof.
50. Use of a maternally produced antibody that binds specifically to a paternally-inherited fetal antigen for identifying a fetal cell in maternal blood or a nucleated cellular fraction thereof.

51. Use of a maternally produced antibody that binds specifically to a paternally-inherited fetal antigen as a marker for identifying a fetal cell in maternal blood or a nucleated cellular fraction thereof.
52. Use of a coded multiplex bead conjugated with a HLA antigen to identify maternal antibody directed against a paternally inherited fetal HLA antigen.
53. Use according to claim 52, wherein the bead is coded by virtue of a fluorescent label.
54. Use according to claim 53, wherein the bead is identified by fluorescence produced by the fluorescent label.
55. Use according to claim 52 wherein the bead-antibody complex is identified by virtue of a secondary fluorescent label to the antibody.
56. Use according to claim 52 wherein the bead-antibody complex is isolated to provide a preparation of antibodies against paternally-derived fetal antigens.
57. Use according to claim 56, wherein isolation is performed by fluorescence activated cell sorting (FACS).